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## **Halalopathy: a science of trust in medicine**

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**Abstract:** The human body is well organized, regulated, and connected. One of the greatest scientific challenges today is to integrate mind, behaviour, and health. Enormous advances in health care have been achieved; however, diseases like cancer still required treatment options beyond therapeutic drugs, namely surgery and radiation. Human being are not only made of cells, tissues, and organs, but also feelings and sensations. Linking mental state with physical health is essential to include all elements of disease. For this purpose, halalopathy has been introduced as a new model to integrate mind, behaviour and health; where psychology, spirituality and rationality can be integrated together to generate a well-organized, regulated and connected health system. Halalopathic approaches are based on mind-trust-drug and mind-trust-belief. If the drug and human's belief are compatible, trust in the rationally designed drug will be synergised, placebo effects will be activated to initiate the healing process. Such an organized health system will lower the body's entropy and increase potential energy, which is an important aspect to promote the healing process, with a therapeutic drug toward complete recovery. This study enlightens laws of compatibility to initiate a domino chain effect to activate placebo effects and lower the body's entropy. The healing power of each effect will contribute to the healing process and enhance the total drug effects.

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## Commentary

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## Commentary

**Halalopathy: a science of trust in medicine****Jawad Alzeer**

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**ABSTRACT**

The human body is well organized, regulated and connected. One of the greatest scientific challenges today is to integrate mind, behaviour and health. Enormous advances in health care have been achieved. However, diseases like cancer still require treatment options beyond therapeutic drugs, namely surgery and radiation. Human being is not only made of cells, tissues and organs, but also feelings and sensations. Linking mental state with physical health is essential to include all elements of disease. For this purpose, halalopathy has been introduced as a new model to integrate mind, behaviour and health, where psychology, spirituality and rationality can be integrated together to generate a well-organized, regulated and connected health system. Halalopathic approaches are based on mind-trust-drug and mind-trust-belief. If the drug and human's belief are compatible, trust in the rationally designed drug will be synergized and placebo effects will be activated to initiate the healing process. Such an organized health system will lower the body's entropy and increase potential energy, which is an important aspect to promote the healing process, with a therapeutic drug toward complete recovery. This study enlightens laws of compatibility to initiate a domino chain effect to activate placebo effects and lower the body's entropy. The healing power of each effect will contribute to the healing process and enhance the total drug effects.

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## 1. Introduction

Thoughts/concepts that humans adapt, dictate our behavior and attitude, and influence our thinking [1]. The human mind is the center where all thinking processes take place. The thinking process requires to transfer a reality, through sensation, to the mind; and based on stored knowledge, reality can be judged or analyzed. Stored knowledge in the mind is cumulative and is acquired through family, study, experience and belief. Thus, all therapies use the basic processes of the human mind to effect change. Sickness is an abnormal state, where human, animals and plants are prone to go through it. Plants produce secondary metabolites to fight disease, whereas animals follow their instincts to select plants in order to prevent or heal ailments. Humans have rationalized phytotherapy and used medicinal plants and their chemical components in various forms for the therapeutic benefits [2].

The human body is a complex biological system involving cells, tissues and organs, all working together to maintain internal balance. Conventional medicine is effective in treating many diseases; however, complex diseases such as cancer are becoming more challenging and disease management decisions are increasingly complex [3]. Chemotherapy is one of the most common treatments for cancer. However, chemotherapy is a complex treatment that requires balancing the benefits of treating tumors with the adverse toxic side effects caused by anticancer drugs. Due to this toxicity concern, less effective doses have been used and treatment effectiveness has been hindered [4].

Many drugs have been approved and a large majority of newly approved drugs have finitely limited added therapeutic value. Designing a brand-new drug can take up to 10 years and costs billions of dollars. The challenging question is how to make the existing drugs more effective. One possibility is that the concept of healing is deepened and expanded to include all elements of disease. Humans are not only made of cells, tissues and organs, but feelings and sensations are also part of their nature. Thus, body and mind are closely connected and hence linking mental state with physical health is essential [5]. Humans are a social and rational entities; thus humans need to involve the power of mind, complementary with

therapeutic agents to achieve complete recovery [6]. Many medical models have been designed to improve the therapeutic window and produce more effective treatments [7,8]. Personalized treatment is a new option where many researchers are actively involved in creating the right treatment for the right individuals at the right time [9].

Halalopathy has been introduced as a new concept in medicine, used in combination with modern medicine to provide better treatment [10]. The concept constitutes as a new therapeutic option where man's moral and spiritual values are utilized along with material values "therapeutic agents" to offer the right treatment for the right patient [11]. Halalopathy or permissible therapy is a method of treating disease by the permissible drugs, whilst permissibility represents a compatible relation between therapeutic drug and human beliefs. Halalopathy is characterized by order and work synergistically with the prescribed medication, which can be implemented to various beliefs and lifestyles with the intention to create a favourable circumstance by means of trust, confidence and entropy.

In halalopathy, more effective treatment could be achieved if the drug is qualified and trusted; qualified drugs are rationally designed and approved, whereas trust can be built by finding a connection between the therapeutic drug and human beliefs, with the intention to generate a regulated and trusted system. Halalopathy complies well with precise medicines where a drug with the precise requirement will be approved for a precise patient. Complete recovery can be realized mainly (or partially) by a therapeutic drug and partially (or mainly) by the placebo effect and entropy through a compatible system. The healing approach may well affect nongenetic changes that the human genome experiences as a result of interaction with the environment. Epigenetics has been used to rationalize the concept and explain the placebo effect and spontaneous healing [10].

The principles of halalopathy are mainly derived from Islamic references [12], and guidelines for the production of permissible therapy "halal pharma" have been implemented in many Muslim countries, thus the concept is mainly attractive for Muslim but still adaptable by other beliefs and lifestyles. To the best of our knowledge, halalopathy is the first to address entropy as the main target for prevention and cure. Halalopathy is proposing a pathway to make existing drugs more effective, and the path is adaptable to any beliefs or lifestyles that will assist in lowering body's entropy no matter whether it goes through yoga, mindfulness, music, spiritual training and other behaviors or valid tools recommended by certain cultures or beliefs (Christianity, Islam, Judaism, Hindus or others).

This study aimed to explore further the concept of halalopathy and enlighten known facts such as the law of compatibility to initiate a domino chain effect to generate well organized, regulated and connected health systems.

## 2. Placebo effect

The patient's attitudes and understanding of medicine and treatment are a fundamental part of the healing process. Creating trust between patient and other healing elements is indispensable in the healthcare system and acts as a major predictor of adherence to treatment, healthcare utilization, healthcare quality and healthy behavior. Developing trust is not only a moral value in medicine but it is also an important clinical tool that clinicians need to utilize and a prerequisite for a powerful placebo effect. Positive expectation is a key process in the placebo effect and plays a role in achieving heightened response to therapy. The placebo effect is a positive therapeutic outcome that can occur after the administration of an inert substance or intervention by initiating a physiological or psychological response [13]. Placebo research has made impressive improvements over recent years, most notably in the neurobiology of placebo effects [14]. Placebos are sometimes used as a therapy and can result in measurable physiological changes. However, there is much dispute as to whether a placebo should be used as a therapy, rather than just acting as a control in a clinical trial. Placebo-drug reactions have recently been studied systematically for efficacy and safety in drug data pooled from randomized, placebo-controlled multicenter studies [15]. Results suggest that the use of a placebo may be justified in some types of disease where it is known to be helpful, but not in metabolic diseases where it is necessary to alter the physiological parameters of blood, such as cholesterol, glucose or thyroid hormones, which can be regulated by therapeutic drugs [16].

Placebo effects could be utilized as complementary tools in improving response to therapy [17]. To secure the more positive therapeutic outcome, the therapeutic drug needs to be used in fighting disease, but the more effective result can be achieved if trust is developed between patient and other healing elements. Development of trust in the therapeutic provider may lead to improved confidence, heightened expectations and innate capacity for healing. These conceptions associate healing with personal interactions and enhance our learning tools to understand how one can better catalyze the process of healing to generate more effective treatment. The placebo effect can initiate or partially be involved in the healing process whereas therapeutic drug enriches the process and guides toward complete recovery.

### 3. Entropy

Energy therapy is a form of complementary medicine that aims to create a state of balance through energy flow in the human body. Energy therapy heals certain mental or physical disorders by rebalancing the energy field, reduces stress and anxiety, and promotes well-being [18].

Generally, the energy has been defined as the ability to do work, stored in the form of potential energy, liberated in different forms such as kinetic energy, and lost as entropy [19]. Work is concomitant with entropy; an increase in entropy is associated with a loss of ability to do work. In the context of a human system, human entropy can be strongly connected to self-confidence. Human without confidence or self-assurance will be confused, uncertain, disordered and may lead to limited capability and productivity. Confidence can be gained if thoughts are reorganized, the internal disorder is minimized, and a state of dynamic equilibrium is regained. Dynamic equilibrium is a stable state in which all parts of the body work together to create an internal balance. Dynamic equilibrium is complex and influenced by many factors such as lifestyle, nutrient intake, stress response capabilities, immune system, metabolic activities and genetics [20]. The system in the state of dynamic equilibrium has lower entropy whereas the maximum entropy state is developed when compatibility is dissipated, and internal balance is lost.

Entropy is a powerful explanatory tool for cognitive neuroscience; it provides a quantitative index of a dynamic system's randomness or disorder [21]. In general, energy imbalance may affect changes in the rate of biological processes, influence certain physiological activities and may lead to impaired function on the cellular, tissue and organ level, and eventually lead to disease [22]. Drugs affect the speed of biological functions within the cells; they neither change the basic character of existing processes nor produce new functions within the body. Drugs can either speed up or slow down biochemical reactions in the body by binding mainly on a receptor site to either activate (agonists) or block (antagonists) the receptor response and regain a dynamic equilibrium state [23]. It is not very clear what is the role of entropic energy in developing or curing disease, though its implication in yoga and other complementary therapies is growing [24]. Apparently, the creation of internal self-confidence can lower entropy and act as a complementary factor along with therapeutic drugs to adjust the dynamic internal balance and restore health.



#### 4. Compatibility

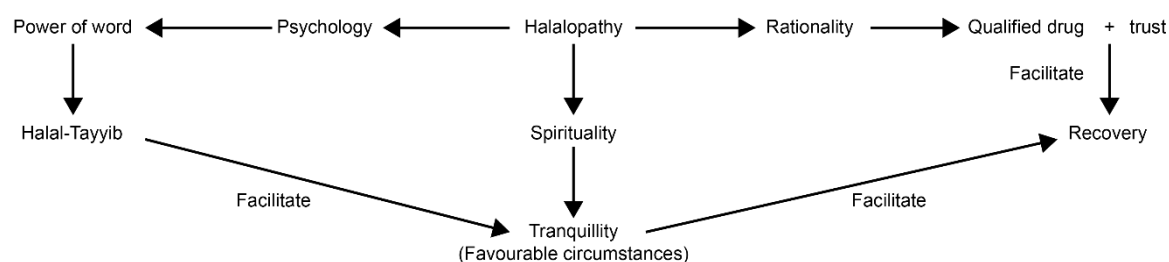
According to the premise of ergonomics, system-human compatibility should be considered at all levels, including physical, perceptual, cognitive, emotional, social, organizational and environmental considerations [25]. In general, compatibility is the capacity for two or more systems to work together in harmony without having to be altered. Compatibility concept has been proven to be useful in many aspects: administration of more than one drug [26], organs transplantation, recipient and donor, blood group matching [27], and most important, the compatibility of cure and illness. Compatibility in marriage is a key to success and happiness whereas compatibility in medicine is a key to health restoration. Psychological compatibility is the essence of mental health and represents a natural process where individuals consistently attempt to create a potential for coexistence between individuals and their personality, environment, or their concepts and points of view about life. Individuals regulate the process by rationalizing and/or adjusting their behavior with different effects until reaching psychological stability and social adaptation to their surroundings with relative satisfaction. Humans are a unique entity, with abilities to rationalize all aspects of life. Adapting rational values creates a more influential personality and self-confidence characteristics; such enrichments will generate the atmosphere of happiness and competency [28]. The human mind is the center where all thinking processes take place. The thinking process requires reality, sensation as well as stored knowledge to perform a rational process. Compatibility between idea and behavior generates ideology, whereas compatibility between mind and therapy generates optimism. The mind can rationalize systems like lifestyle or religion, and understand their impact on behavior, feeling and treatment. Thus, compatibility between therapy and human beliefs generates a more integrated and stable system, creates a state of existing together, reduces intolerance, and hence improves the body's defense system to tolerate the presence of foreign materials, like drugs, without immune reaction [29]. Often higher efficacy can be achieved by either increasing the dose or extending the duration of action; however, increasing the dose tends to have a higher frequency of adverse reactions. The tolerant system resulted from the compatibility between therapy and mind, may often lead to considering the drug as a compatible entity; consequently, rejection mechanisms will be lowered and the duration of action will be prolonged.

#### 5. Halalopathy: a therapeutic model

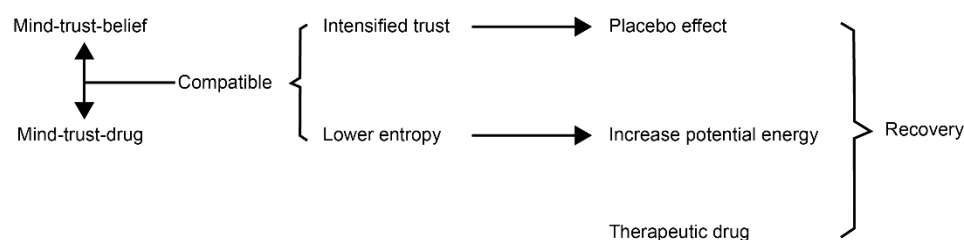


The biology of the brain and its higher cognitive functions are the core of health and therapy. One of the greatest scientific challenges today is to integrate mind, behavior and health. The mind can shape behavior and health through organized, regulated and connected systems, where the power of the mind, through trust and therapeutic drugs, works cooperatively to induce more effective treatment. Values derived from religion have important effects on behavior and stress responses. Enrichment of human moral and spiritual values will contribute to the totality of the healing process and enhance the total drug effect [30]. Establishing a compatible relation between therapy and individual beliefs generates a regulated and trusted system, facilitates harmonious dynamic equilibrium and offers the right treatment for the right patient [31].

A holistic approach to personal health and healthcare is a core tenant of many religions, but believers have struggled to adopt a centric approach to preventative as well as reactive medicine [32]. Halalopathic medicine, as a new concept, utilizes a holistic approach in treating the entire person, where psychology, spirituality and rationality are used in combination to affect changes. The principle and art of cure by halalopathy are based on the trinity principle “power of word-tranquillity-drug”. Power of word facilitates tranquillity, and tranquillity, in turn, facilitates the drug to act more effectively (Fig. 1). This principle is adapted from Islamic references [12], but many of them are shared with other religions. In practice, halalopathy is proceeded through a combination of two approaches: mind-trust-drug and mind-trust-belief; in the first approach, the disease can be cured by trusted and rationally designed drugs whereas in the second approach trust is developed if the belief is rationally realized. If drugs and belief are compatible, a domino chain effect will be initiated, trust will be developed and the placebo effect will be activated (Fig 2). Consequently, an organized system between mind and drug is established, faith in the treatment is intensified, entropy is lowered, potential energy is increased and self-assurance is enriched. These are the most favorable circumstances needed to activate the healing process and achieve more effective treatment.



**Fig. 1.** Halalopathic principles.

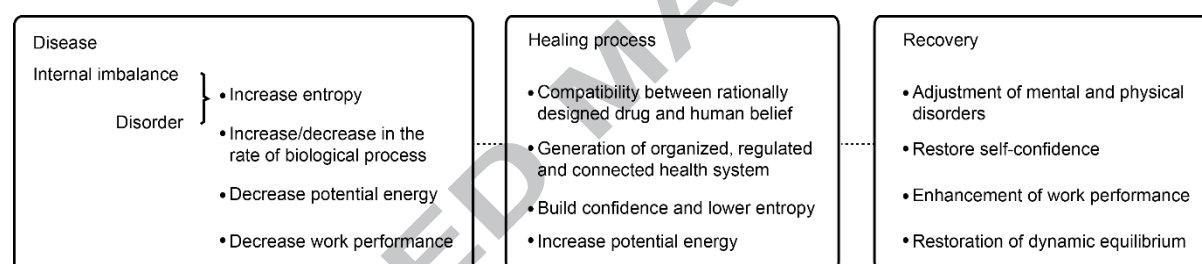


**Fig. 2.** Halalopathic approaches.

Halalopathy, as a model for Islamic belief, can be implemented for the production of permissible drug by following the general principle of Halal-Tayyib [33]; clean from any potential nonhalal ingredients, Tayyib processes and complies with Islamic principles. The halal pharmaceuticals sector is expanding and more permissible (halal) drugs are produced, and ingredients are increasingly halal certified. Highly critical ingredients are present substantially in many drugs and their compatibility with halal status is questionable. To generate drugs that comply with halalopathic concept is not difficult; many of the existing drugs are intended to be halal. The newly approved drug is recommended to be processed and formulated in accordance with Halal-Tayyib standards. Medicine labelled with Halal-Tayyib “power of the word” will be selected eagerly, particularly by patients living in the Muslim countries. The word “Halal-Tayyib” will convey to the patient that the drug has been prepared under maximum hygiene and minimum contamination, and the whole process is clean and pure and comply with Islamic principles. This knowledge will create trust, and generate compatible system between drug and belief, and comfortable feelings and self-confidence will develop “tranquillity.” These favorable circumstances will act cooperatively with therapeutic “drugs” to induce more effective treatment. Similarly, the concept could be applied more broadly and analogously to other lifestyles and belief, such as vegetarian, vegan and kosher.

In halalopathy, the disease is a disorder caused by internal imbalance. The disordered state leads to an increase in entropy and a decrease in potential energy, accompanied by a decrease in work performance. Restoration of health can be achieved if mental and physical disorders are adjusted. The therapeutic drug, rationally designed and compatible with human’s belief will restore the internal balance. In homeopathy [34], the concept of cure is derived from the principle “like cures like,” whereas in halalopathy like is created through compatibility to induce cure (Fig. 3). The compatible drug will enhance communication between mind and body, build trust, and restore self-confidence. Such an atmosphere will lower entropy and increase potential energy. In general, potential energy cannot afford to remain trapped inside, but it drives the body to perform work and enhance the restoration of dynamic equilibrium.

Miraculous recoveries or spontaneous remissions from serious or life-threatening illness are always seen as abnormal occurrence that cannot be reproduced. Integrative medicine is based on the belief in the body's self-healing capacity. Spontaneous remissions have been explained by conventional medicine as coincidence, misdiagnosis and possibly involving the immune system [35]. Halalopathy believes that entropy plays an important role in disease development and cure; science does not believe in a miracle, thus miraculous recoveries or spontaneous remissions have to do with lowering body's entropy through prayer, meditation, stress management, yoga and mindfulness. Monitoring entropy is used as a method to evaluate the depth of anesthesia [36] and can be used to monitor health status as it changes with exposure to infections or vaccines. People with infections or breast cancer, generally have higher entropy values than healthy individuals [37]. Increasing entropy is seen as the fundamental driving cause of neural and cognitive decline in the elderly, which can lead to the development of Alzheimer's disease [38].



**Fig. 3.** Law of compatibility to induce cure.

Deducing new models that could cope with the increase of entropy is useful in prevention and treatment. Halalopathy needs more exploration, and more studies are needed to understand the role of entropic energy in disease formation particularly cancer [39]. A new therapeutic program needs to be initiated to target entropy as an energy source for disease development and particularly for cancer cell growth and survival.

## 6. Conclusion

Halalopathy is a new model for therapy. The insights into cognition, social behavior and implementation of the concept have been described. Halalopathic principles are based on psychology, spirituality and rationality, where the power of word and tranquillity create favorable circumstances, whereas qualified and trusted drugs promote therapy toward complete recovery. Halalopathic approaches are based on mind-trust-drug and mind-trust-belief; compatibility between drugs and beliefs will enhance trust and lower entropy, which

are essentials for activating placebo effect and increasing potential energy, respectively. Placebo effect initiates the healing process; potential energy provides an important energy source to promote healing process toward recovery. Rationally designed drugs either activate (agonists) or block (antagonists) the functions of cells and regain the dynamic equilibrium state. The healing power of each component will contribute to the totality of the healing process and enhance the total drug effect. Lowering body's entropy is an important therapeutic element where alternative therapies play a useful role in adjusting the body's entropy. Halalopathy can act as a source of education and motivation for patients to assume more personal responsibility for their health by adapting and enriching certain values to achieve more effective treatment. The concept needs more exploration to determine the role of entropy as adjusting parameter and therapeutic target.

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### **Conflict of interest**

The author declares no conflict of interest.

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